

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

THE POLICE RETIREMENT SYSTEM OF
ST. LOUIS, on behalf of itself and all others
similarly situated,

Plaintiff,

- against -

BOFA SECURITIES, INC., MERRILL
LYNCH, PIERCE, FENNER & SMITH
INC., BARCLAYS CAPITAL INC., BNP
PARIBAS SECURITIES CORP.,
CITIGROUP GLOBAL MARKETS INC.,
CREDIT SUISSE SECURITIES (USA) LLC,
DEUTSCHE BANK SECURITIES INC.,
FTN FINANCIAL SECURITIES CORP.,
GOLDMAN SACHS & CO. LLC, J.P.
MORGAN SECURITIES LLC, MORGAN
STANLEY & CO. LLC, AND UBS
SECURITIES LLC

Defendants.

Case No.:

CLASS ACTION COMPLAINT

JURY TRIAL DEMANDED

Plaintiff the Police Retirement System of St. Louis (“St. Louis Police Retirement System”), individually and on behalf of all others similarly situated, brings this class action for treble damages and injunctive relief and alleges as follows:

NATURE OF THE ACTION

1. Over the past ten years the Defendants above have been accused of manipulating or conspiring to manipulate a vast array of financial rates, benchmarks, and instruments. This case arises out of a conspiracy to fix the prices and restrain competition in the market for unsecured bonds issued by Government Sponsored Entities (“GSEs”).

2. A GSE is a quasi-governmental entity established to enhance the flow of credit to specific sectors of the American economy. GSEs, like the FHLB, FFCB, Fannie Mae, and Freddie Mac (all defined below) were all created by acts of Congress.

3. The Federal Home Loan Banks (“FHLB”) were chartered by Congress in 1932 to provide member financial institutions with products and services that facilitate the financing of housing and community lending. The Federal Farm Credit Banks Funding Corporation (“FFCB”), is the leading provider of loans, leases, and services to rural communities. The Federal National Mortgage Association (“Fannie Mae”) was created by Congress in 1938 to provide local banks with federal money to finance home loans to raise the rate of home ownership and the availability of affordable housing. In 1968, President Lyndon B. Johnson privatized Fannie Mae. Two years later the Federal Home Loan Mortgage Corporation (“Freddie Mac”) was started, in part to prevent monopolization of the market. The FHLB, FFCB, Fannie Mae, and Freddie Mac are all GSEs.

4. GSEs, like Fannie Mae and Freddie Mac, issue their own bonds with sizes and terms that are appropriate to the needs and purposes of financing. Bonds issued by GSEs like Fannie Mae and Freddie Mac provide credit to the housing sector. These bonds, unlike U.S. Treasury Bonds, are not backed by the full faith and credit of the U.S. Government. Fannie Mae and Freddie Mac issue both short-term and long-term debt. Fannie Mae and Freddie Mac debt securities are callable while some are non-callable. Callable debt gives Fannie Mae and Freddie Mac the option, but not the obligation, to repurchase or redeem the security by a specified date.

5. Fannie Mae and Freddie Mac's debt securities are sold by a select group of securities dealers and dealer banks through a variety of negotiated and underwritten methods.

6. Freddie Mac and Fannie Mae maintain a stringent application process in selecting the companies that have the privilege of joining select Dealer Groups, which support Reference Bills Securities, Discount Notes Securities, Medium Term Notes and Reference Notes Securities.

7. The goal of that application and selection process "is to develop a diverse supply chain and ensure inclusion and transparency in the procurement of goods and services that support Freddie Mac's key lines of business and operations."¹

8. Plaintiff, and Defendants' other clients, expected the Defendants to compete vigorously for the business of their investor clients. In financial markets, competition among dealers drives better terms and prices for investors – just as competition among suppliers drives better product quality and prices throughout the economy. The Supreme Court has described collusion among competitors of the type that occurred in this case as "the supreme evil of antitrust."

¹ <http://www.freddie.mac.com/about/people/suppliers.html>

9. Investors who want to transact in GSE bonds but who do not buy them at the issuance stage must purchase and sell them in the secondary market. They rely on dealers – the defendants here – to buy and sell GSE bonds in the resale, or secondary, market. When a customer wants to buy or sell GSE bonds in the secondary market it asks a dealer for a quote. The dealer, in turn, gives the customer a “bid,” the price it would pay for the bond or an “offer,” the price at which it would sell the bond. The difference between the bid and the offer – known as the “bid-offer spread” – is the way the dealer is paid. The dealer attempts to buy bonds at a low price and sell them at a higher price.

10. Defendants were not willing to accept the bid-offer spread that would result from competition in the market for GSE bonds as their sole commissions. Prior to the financial crisis, the volume of GSE bond issuances had risen steadily for many years and dealers were able to make healthy profits underwriting GSE bond issuances and trading the bonds on the secondary market. However, after the financial crisis, and particularly after the government’s mandate to reduce Fannie Mae’s and Freddie Mac’s balance sheets, the volume of new issuance began to decline. This naturally resulted in a steady erosion in profits for the desks underwriting and trading GSE bonds.

11. Rather than compete for customers’ business by tightening spreads, which benefits customers but reduces the dealers’ profits, Defendants conspired to manipulate the prices and spreads of GSE bonds.

12. Beginning at least as early as January 1, 2012, Defendants conspired by talking to each other, secretly, illicitly, and continuously, nearly every day and throughout the day, over the course of many years. These communications allowed the Defendant cartel members to

implement their conspiracy in real time daily, this ensured their conspiracy would have the maximum effect.

13. The traders involved in this conspiracy operated out of standing electronic chat rooms on Bloomberg, which facilitated their conspiracy. In these chat rooms the traders shared highly sensitive trading information about their client orders and about the trading strategies of their customers. Defendants also conspired through other means, such as emails, text messages, and telephone calls.

14. The GSE bond market was incredibly vulnerable to exactly this type of illicit conduct. The desks trading GSE bonds for the Defendant banks maintained no divisions or ethical walls between the “syndicate” functions relating to primary bond issuances and secondary trading. As a result, the traders who structured and marketed new bond issuances during the Class Period—and who, as a part of that function, regularly communicated non-public pricing and client information with the other banks that make up the rest of the underwriting syndicate—were the same people who traded those GSE bonds post issuance in the secondary market. Because new bonds were issued regularly throughout the Class Period, traders on Defendants’ desks trading GSE bonds were communicating with traders at other Defendant banks, exchanging competitively sensitive information, on a regular and ongoing basis.

15. The lack of any meaningful division or ethical walls between the syndicate and secondary trading functions led to the widespread dissemination of inside information pertaining to primary issuances by the GSEs. Individuals who acted as traders in the secondary market were privy to information related to the pipeline of primary issuance by the GSEs, which they used to their advantage. Sharing information on their pipelines, the conspirators were able to position themselves to earn extraordinary trading profits in the secondary market. For example,

when a trader at one of the Defendant banks was made aware of the specific non-public details of a new debt offering, including deal size, maturity, buy-side interest, etc., they would position themselves to profit handsomely. This behavior on behalf of the Defendants was rampant during the Class Period.

16. Defendants' clients, of course, had no idea that Defendants had secretly agreed not to compete. Investors often engaged in extensive efforts to drive competition among Defendants to secure better price terms for their GSE bonds. Little did they know that, behind the scenes, Defendants would invariably share their clients' confidential information and coordinate their actions to ensure such efforts to benefit from competition went nowhere.

17. Defendants' overarching objective was to ensure that the cartel members would transact with their investor client at prices that were more favorable for the conspiring dealer—and thus worse for the customer—than could have been achieved absent collusion. In addition to refraining from competing with each other, Defendants actively helped each other to subvert competition so they could execute GSE bond trades on financial terms that were more favorable to them than they could have executed in a competitive market.

18. As with the Defendant banks' previous manipulation of other financial markets, Defendants' GSE bonds conspiracy is currently under investigation by the U.S. Department of Justice ("DOJ"). In June 2018, *Bloomberg* reported that the DOJ had launched a criminal investigation regarding "whether traders manipulated prices in the \$550 billion market for unsecured bonds issued by Fannie Mae Freddie Mac."² According to the *Bloomberg* report, DOJ

² David McLaughlin & Tom Schoenberg, *U.S. Opens Criminal Probe Into Trading in Fannie, Freddie Bonds*, *Bloomberg* (June 1, 2018), <https://www.bloomberg.com/news/articles/2018-06-01/trading-in-fannie-freddie-bonds-is-said-to-be-probed-by-u-s->.

officials are “looking at potential fraud and antitrust violations,” and are examining whether traders at banks coordinated with one another in order to benefit the institutions they work for.”³

19. As a result of Defendants’ abandonment of competition, and their extensive efforts to harm their customers, every GSE bond transaction in which Class members engaged with Defendants was impacted by the conspiracy. It is well known in the academic literature, discussed below, that a reduction in competition among dealers harms investors who purchase the financial product for which competition was reduced.

20. Here, the application of this well-accepted phenomenon to the GSE bond market is confirmed by an economic analysis of historical data for unsecured bonds issued by Fannie Mae, Freddie Mac, FFCB and FHLB, using a data set that includes more than 10 years of intraday pricing data and more than 100 million observations, and covering approximately \$1.5 trillion in total issuances. As set forth in Section III below, an initial analysis demonstrates that bid-offer spreads in the market for GSE bonds were artificially inflated from January 2012 until June 1, 2018, at which point spreads returned to levels that one would expect in a properly functioning market. This pattern is indicative of a conspiracy that started to break apart at the first news of the DOJ investigation.

21. Defendants’ conspiracy offends the very core of the antitrust laws. Defendants were supposed to be aggressively competing for the business of their customers, not secretly conspiring to achieve profits they could not have achieved on their own. Accordingly, Plaintiff brings this class action to hold Defendants accountable for the injuries they have caused.

³ *Id.*

JURISDICTION AND VENUE

22. This Court has subject matter jurisdiction over this action pursuant to Sections 4 and 16 of the Clayton Act (15 U.S.C. §§ 15(a) and 26), and pursuant to 28 U.S.C. §§ 1331 and 1337(a).

23. Venue is proper in this District pursuant to 15 U.S.C. §§ 15(a) and 22, as well as pursuant to 28 U.S.C. § 1391(b), (c), and (d), because during the Class Period, all Defendants resided, transacted business, were found, or had agents in this District; a substantial part of the events or omissions giving rise to these claims occurred in this District; and a substantial portion of the affected interstate and commerce discussed herein was carried out in this District.

24. This Court has personal jurisdiction over Defendants pursuant to the nationwide contact test provided for in 15 U.S.C. § 22, because Defendants, as set forth below, were formed in or have their principal places of business in the United States. In addition, this Court has personal jurisdiction over Defendants, because each Defendant transacted business throughout the United States, including in this District; each Defendant had substantial contacts with the United States, including in this District; each Defendant committed overt acts in furtherance of Defendants' conspiracy was directed at, and had the intended effect of, causing injury to persons residing in, located in, or doing business throughout the United States including in this District.

25. Defendants' activities, and those of their co-conspirators, were within the flow of, were intended to, and did have a substantial effect on interstate commerce.

PARTIES

26. Plaintiff St. Louis Police Retirement System, is a pension fund with its headquarters St. Louis, Missouri. Plaintiff transacted in approximately \$2.6 million of GSE bonds with one or more defendants.

27. Whenever reference is made to any Defendant entity, such reference includes that entity, its parent companies, subsidiaries, affiliates, predecessors, and successors. In addition, whenever reference is made to any act, deed, or transaction of any entity, the allegation means that the entity engaged in the act, deed, or transaction by or through its officers, directors, agents, employees, or representatives while they were actively engaged in the management, direction, control, or transaction of the entity's business or affairs.

28. **Bank of America.** Defendant BofA Securities, Inc., which was formerly known as BofAML Securities, Inc. before being rebranded in February 2019, is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. At all times during the Class Period, BofA Securities, Inc. had traders in New York who facilitated and executed GSE bond transactions with the Class. BofA Securities, Inc. directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. BofA Securities, Inc. purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices.

29. Defendant Merrill Lynch, Pierce, Fenner & Smith Inc. is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. On November 1, 2010, Banc of America Securities LLC ("BAS") was merged into Merrill Lynch, Pierce, Fenner & Smith Inc. BAS no longer exists as an entity, and Merrill Lynch, Pierce, Fenner & Smith Inc. is the surviving entity and is BAS's successor-in-interest. At all times during the Class Period, Merrill Lynch, Pierce, Fenner & Smith Inc. had traders in New York who facilitated and executed GSE bond transactions with the Class. Merrill Lynch, Pierce, Fenner & Smith Inc. directed its collusive GSE bond transactions to the United States, including

New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. Merrill Lynch, Pierce, Fenner & Smith Inc. purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices.

30. Defendants BofA Securities, Inc. and Merrill Lynch, Pierce, Fenner & Smith Inc. are referenced collectively in this Complaint as “Bank of America.” .

31. **Barclays.** Defendant Barclays Capital Inc. (“Barclays”) is a corporation organized under the laws of Connecticut with its principal place of business in New York, New York. At all times during the Class Period, Barclays had traders in New York who facilitated and executed GSE bond transactions with the Class. Barclays directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. Barclays purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices.

32. **BNP Paribas.** Defendant BNP Paribas Securities Corp. (“BNP Paribas”) is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. At all times during the Class Period, BNP Paribas had traders in New York who facilitated and executed GSE bond transactions with the Class. BNP Paribas directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. BNP Paribas purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices. FINRA records from January 2019 indicate that Alexis Frum (a.k.a. Alex Frum), a director and head of agency trading who was employed at

BNP Paribas since July 2010, is being investigated due to “[a]llegations regarding communications with other syndicate members on bond underwritings.”⁴

33. **Citi.** Defendant Citigroup Global Markets Inc. (“Citi”) is a corporation organized under the laws of New York with its principal place of business in New York, New York. At all times during the Class Period, Citi had traders in New York who facilitated and executed GSE bond transactions with the Class. Citi directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. Citi purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices.

34. **Credit Suisse.** Defendant Credit Suisse Securities (USA) LLC (“Credit Suisse”) is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. At all times during the Class Period, Credit Suisse had traders in New York who facilitated and executed GSE bond transactions with the Class. Credit Suisse directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. Credit Suisse purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices.

35. **Deutsche Bank.** Defendant Deutsche Bank Securities Inc. (“Deutsche Bank”) is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. At all times during the Class Period, Deutsche Bank had traders in New York who facilitated and executed GSE bond transactions with the Class. Deutsche Bank directed its

⁴ The FINRA record has been recently updated (likely in late February or March, after the first allegations arose) to reflect that Alexis Frum is involved in a “[n]on-public investigation.”

collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. Deutsche Bank purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices. Defendant Deutsche Bank is one of the primary targets of the DOJ investigation, and Mike Bosl, the head of agency bond trading at Deutsche Bank during the Class Period, is no longer working at Deutsche Bank.

36. **FTN.** Defendant FTN Financial Securities Corp., a subsidiary of First Tennessee Bank N.A. and formerly known as First Tennessee Securities Corp., is a corporation organized under the laws of Tennessee with its principal place of business in Memphis, Tennessee. At all times during the Class Period, FTN Financial Securities Corp. had traders in New York who facilitated and executed GSE bond transactions with the Class. FTN Financial Securities Corp. directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. FTN Financial Securities Corp. purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices.

37. **Goldman Sachs.** Defendant Goldman Sachs & Co. LLC (“Goldman Sachs”) is a corporation organized under the laws of New York, with its principal place of business in New York, New York. At all times during the Class Period, Goldman Sachs had traders in New York who facilitated and executed GSE bond transactions with the Class. Goldman Sachs directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. Goldman Sachs purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices. FINRA records indicate that Jaiman

Lee, a trader in GSE bonds at Goldman Sachs, was discharged in June 2018 due to “allegations regarding communications with other syndicate members on bond underwritings.”

38. **J.P. Morgan.** Defendant J.P. Morgan Securities LLC (“J.P. Morgan”), formerly known as J.P. Morgan Securities Inc., is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. J.P. Morgan acquired Chase Securities, Inc. in 1996 and J.P. Morgan Clearing Corp. in 2016 and is the successor to those entities. At all times during the Class Period, J.P. Morgan had traders in New York who facilitated and executed GSE bond transactions with the Class. J.P. Morgan directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. J.P. Morgan purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices.

39. **Morgan Stanley.** Defendant Morgan Stanley & Co. LLC (“Morgan Stanley”), formerly known as Morgan Stanley & Co. Inc. until 2011, is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. At all times during the Class Period, Morgan Stanley had traders in New York who facilitated and executed GSE bond transactions with the Class. Morgan Stanley directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. Morgan Stanley purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices. FINRA records indicate that Justin Roth, a trader of GSE bonds at Morgan Stanley, was discharged in June 2018 due to “[a]llegations regarding failure to

follow the firm's reporting and escalation procedures and standards involving communications from and with others regarding the representative's trading or markets activity."

40. **UBS.** Defendant UBS Securities LLC ("UBS") is a corporation organized under the laws of the Delaware with its principal place of business in Stamford, Connecticut. At all times during the Class Period, UBS had traders in New York who facilitated and executed GSE bond transactions with the Class. UBS directed its collusive GSE bond transactions to the United States, including New York in particular, and engaged in these activities in the United States, including in New York, including by serving as a trading broker. UBS purposely transacted in GSE bonds in the United States during the Class Period with Class members at artificial prices.

41. **Other conspirators.** Various other entities, persons, firms, and corporations that are unknown and not named as Defendants, have participated as co-conspirators with Defendants and have performed acts and/or made statements in furtherance of the conspiracy. Defendants are jointly and severally liable for the acts of their co-conspirators whether named or not named as Defendants in this Complaint.

GSE BONDS

A. The Nature of GSE Bonds

42. A GSE bond is a bond issued by a Government-Sponsored enterprise such as Fannie Mae or Freddie Mac. These bonds do not include those issued by (a) the U.S. Treasury or municipalities; (b) foreign governments or agencies; or (c) supra-national or regional bodies. GSE bonds occupy an important segment of the broader bond market, sitting between sovereign issues on the one hand and private credit issuers on the other.

43. The Omnibus Reconciliation Act of 1990 defines a GSE as a “corporate entity created by a law of the United States,” which:

(A)(i) has a Federal charter authorized by law; (ii) is privately owned, as evidenced by capital stock owned by private entities or individuals; (iii) is under the direction of a board of directors, a majority of which is elected by private owners; (iv) is a financial institution with power to – (I) make loans or loan guarantees for limited purposes such as to provide credit for specific borrowers or one sector; and (II) raise funds by borrowing (which does not carry the full faith and credit of the Federal Government) or to guarantee the debt of others in unlimited amounts; and

(B) (i) does not exercise powers that are reserved to the Government as sovereign (such as the power to tax or to regulate interstate commerce); (ii) does not have the power to commit the Government financially (but it may be a recipient of a loan guarantee commitment made by the Government); and (iii) has employees whose salaries and expenses are paid by the enterprise that are not Federal employees subject to title.⁵

44. GSE bonds can be structured in different ways to meet the needs of different investors and issuers. The traditional coupon-paying GSE bond permits bondholders to receive an annual interest payment rate until the bond matures. GSEs also issue bonds intended for short-term debt obligations such as no-coupon discount notes that are akin to U.S. Treasury Bills.⁶ A GSE may choose to issue no-coupon discount notes at a discount from face value in exchange for not paying interest to the bondholder, with maturities ranging from one day to 360 days, as a short-term debt obligation.⁷ GSEs can also offer bonds with changing interest rates such as floating rate securities (that will pay bondholders interest at a rate relating to an underlying benchmark) or step-up notes (that will pay bondholders interest at rates that “step up” over time according to a pre-set schedule).⁸ Floating rate GSE bonds have their interest rates

⁵ Omnibus Budget Reconciliation

⁶ *Agency Securities*, Financial Industry Regulatory Authority (“FINRA”), <http://www.finra.org/investors/agency-securities>

⁷ Bond Mkt Ass’n, GSE Debt Securities at 25, http://www.freddiemac.com/debt/pdf/guide_gse_debtsecurities.pdf.

⁸ *Agency Securities*, FINRA, <http://www.finra.org/investors/agency-securities>.

periodically adjusted to the movement of a benchmark rate, such as the London Interbank Offered Rate (“LIBOR”).

45. GSE bonds are typically denominated in U.S. Currency. GSE bonds thus are attractive to investors looking for high-quality bonds that often have higher yields than U.S. Treasuries. This case concerns unsecured GSE bonds i.e., bonds issued by Freddie Mac, Fannie Mae, FFCB, FHLB, that are not backed by any collateral. Fannie Mae, Freddie Mac, and FFCB bonds are issued in \$1,000 denominations, while FHLB bonds are issued in \$10,000 denominations for the first increment and \$5,000 denominations thereafter.

46. Generally speaking, “yield refers to the effective rate of interest being paid on the bond, taking into account the amount actually paid by that purchaser. Which is to say, a bond may make the same exact interest payments over time, calculated based on the original face value of the bond. But if the bond is sold on the secondary market for more (or less) than its face amount, the new bondholder will in effect be getting a lower or higher effective rate of interest. Thus, the “yield of the bond has an inverse relationship to the “price” paid for the bond, in the literal sense the amount of money paid to purchase it.

47. Traders generally discuss the price of GSE bonds in terms of spreads. In this context, the spread refers to the difference between the yield on the GSE bond and the yield for comparable U.S. Treasuries. This meaning of “spread” is not to be confused with the “spread” as in the bid-offer spread, which is the difference between the yield a dealer is willing to buy a bond for, and the yield a dealer is willing to sell a bond for.

B. Issuance of GSE Bonds

48. Unlike U.S. Treasury bonds, which are often issued through auctions, GSE bonds are typically issued through syndication or reverse inquiry.

49. In a syndication, if a GSE wants to issue bonds, it will retain a bank or group of banks to underwrite its bond issue and sell those bonds to investors. The underwriting or managing banks are responsible for working with the GSE and with each other to structure and price the bond, and for finding investors to purchase the bonds at the issuance.

50. Freddie, Fannie, and FHLB have dates reserved on the calendar that provide them with the option to bring a new syndicated benchmark-style transaction to the market. These are called “on-the-run GSE bullets”⁹ and are marquee transactions for both issuers and underwriters that are selected to serve as lead managers. They are the most liquid GSE securities with large notional amounts, usually a minimum of \$2 billion.

51. Before the issuers choose the lead managers for an upcoming issuance, they hold discussions with the leading trade desks in the days preceding the issuer’s calendar slot to gauge market sentiment and receive feedback on investor interest and other notable flows of GSE securities. Next, the GSE selects a maturity (Either two, three, five or 10 years) to bring to market based on investor demand, as well as the issuer’s need for specific funding. Lead managers are chosen as well.

52. The day the GSE has the option to bring a new deal to market, the GSE will either announce terms for a new deal or tell the market that it is choosing to pass altogether. If a new deal is announced, the names of the lead managers (typically three banks) are released, as well as the maturity date and price guidance in the form of a spread to the underlying treasury security. A small group of co-managers is also formed.

⁹ A “bullet” bond is a debt instrument where the principal is entirely repaid on the maturity date, as opposed to amortizing over the bond’s lifetime. Bullet bonds cannot be redeemed early by an issuer, which means they are non-callable.

53. Immediately after the new issuance is announced, the order period begins, and investors are allowed to place orders. All orders are split among the lead managers and they share equally in the economics of the deal. One manager functions as the book-runner, but all lead managers can see the order book. Based on how the book is developing, price guidance will be fine-tuned. If demand is very strong for the bond, the issue prices may be tightened. Which is to say, the planned yield above treasuries (the “spread”) may be reduced, meaning the bonds will effectively be paying less interest. This is, in effect, raising prices in the face of high demand. If, on the other hand, demand for the bond comes in weaker than anticipated, then the planned yield over treasuries may be increased, meanings the bonds will effectively be paying more interest, This, in effect, lowers prices in the face of weak demand.

54. The issuance is launched the morning after it is announced, meaning official pricing will occur later in the morning at the current level of price guidance. Once the call takes place between the issuer and the lead managers, the final terms are announced to the market along with a time when the issue will be “free-to trade” in the secondary market.

55. On the pricing call, the issuer reviews the terms of the trade with the traders/desk heads from the lead managers. Price guidance is officially confirmed and agreed among the GSE issuer and leader managers as the appropriate spread to use based on relative value measurements in the relevant sector of the market, as well as investor demand. Next, the lead managers will spot the yield of the U.S. Treasury note being used to generate pricing terms, such as the yield to investors for the new-issue (done by adding the spread to the yield of the Treasury security).

56. Usually investors will take delivery of the bonds from the hedge manager. The hedge manager is one of the lead managers that is responsible for facilitating any hedging

activity that investors or the issuer needs as related to the transaction. The hedge manager writes a ticket with the issuer at a price equal to the price to the public less any fees. Fees to the lead managers for syndicated benchmark issues follow a standardized fee schedule determined by the maturity of the new bond issue: two-year maturity is 50-62.5 cents per bond; three-year maturity is 75 cents per bond; five-year maturity is \$1.00 per bond; and 10-year maturity \$1.50 per bond.

57. None of the lead managers ever takes ownership of the new bonds because they are all sold to investors who gave orders during the order taking period. In fact, lead managers are usually short the new bond at the time of pricing because they allocated more bonds to customers than the size of the deal. This is intentional as it facilitates trading once secondary trading begins and dealers look to cover their short positions. The lead managers can trade with customers that own bonds from the new issue, other dealers, or any other market participants just like any ordinary security trading in the secondary market. At the end of the pricing day, a lead manager may go home short or long the new issue.

58. In a reverse inquiry situation, one or more primary dealers will be approached by one or more investors seeking to fulfill an investment need. Alternatively, a primary dealer may perceive an opportunity to structure a debt instrument to meet a need by one or more of its clients. In both of these situations, the primary dealer or dealers will structure the bond in terms of amount, interest rate, maturity, and other variables, and approach one or more GSEs with the proposed bond. If the GSE agrees to issue the bond, the transaction will move forward.

59. Because they issue debt so frequently, the GSEs provided regular updates of their funding targets to approved dealers (which included almost every major bank). These funding targets were typically provided as a spread to LIBOR. For example, Freddie Mac might have a funding target of LIBOR minus 15 basis points for a bond that has a maturity of five years and is

callable in one year (i.e., a “5NC1” bond). Simultaneously to Freddie Mac issuing the 5NC1 fixed rate bond, it would enter into an interest rate swap maturing in five years and cancellable in one year. The respective structures of the bond and swap are an exact match, giving Freddie Mac an effective borrowing cost of LIBOR minus 15 basis points. The ability to structure any type of bond for the buy-side customer as long as it swaps back to the GSE issuer’s LIBOR funding target gave the dealer a high degree of flexibility when responding to reverse inquiries. The high degree of flexibility coupled with the lack of ethical walls between the primary issuance and secondary trading functions made it easy for Defendants to perpetuate the conspiracy.

60. Issuance of unsecured bonds by Fannie Mae, Freddie Mac, FFCB, and FHLB rose steadily in the years leading up to the financial crisis. By 2010, issuances peaked at approximately \$1.4 trillion. Thereafter, however, issuance began to decline such that total issuances in 2018 were only approximately \$650 billion.

C. The Secondary GSE Bond Market

61. GSE bonds are bought and sold in the secondary market. After being issued, GSE bonds can be re-sold and traded by dealers and investors, including by sovereign wealth funds, central banks, pension funds, mutual funds, and hedge funds. Unlike with major exchanges such as the Nasdaq or the New York Stock Exchange, there is no open, anonymous exchange that matches GSE bond buyers and sellers at the best available price. Rather, investors trade GSE bonds over-the-counter, or “OTC,” meaning that investors seeking to trade GSE bonds have no choice but to transact with dealers, such as the Defendants, who provide liquidity by being willing to buy and sell GSE bonds.

62. A GSE bonds dealer quotes prices at which it stands ready to buy or sell. When a customer looks to buy or sell a bond, it asks a dealer for a quote. A quote consists of a “bid” or an “offer” on a particular GSE bond. The “bid” is the price at which the dealer is willing to buy the specific GSE bond. The “offer” is the price at which the dealer is willing to sell the indicated GSE bond. The difference or margin between the bid and the offer is the “bid-offer spread.” The “bid-offer spread” is the dealer’s compensation.

63. Bid-offer spreads are the primary way banks compete against each other for customers. Customers want narrower spreads, meaning, they want to buy bonds for less and sell them for more. By quoting narrower (or “lower”) spreads, Defendants can win sales, gain customers, and build market share. Conversely, quoting higher or wider spreads will result in losses to consumers.

64. Most investor trading of GSE bonds during the Class Period occurred in a so-called “voice” environment, meaning that transactions were executed over the telephone or via electronic chat messaging. In a typical voice trade, an investor contacts one or more dealers’ sales desks to request a quote. The dealer’s sales desk communicates the request to the GSE bonds desk, which returns a quote that the sales desk relays back to the investor. The process typically takes several minutes. The time gap between quote requests and order executions provide Defendants with ample lead time to collude in chat rooms, via instant messaging services, or over the telephone.

65. To a lesser degree, investors also use electronic trading platforms to execute orders with dealers. Electronic trading platforms include single-dealer systems, as well as multi-dealer platforms, such as MarketAxess, Tradeweb and Bloomberg BondTrader. Multi-dealer

platforms enable investors to request quotes from multiple dealers simultaneously, using a request for quote (“RFQ”) protocol that effectively replicates the OTC marketplace.

66. Whether investors transact through electronic trading platforms or by voice, the essential features of the protocol are the same. Investors do not have access to real-time market data to validate whether their dealers’ quotes are competitive. Rather, investors are forced to rely on dealers, such as Defendants, for real-time pricing information on GSE bonds. To find out the price of a GSE bond, an investor must seek a quote from a dealer. In the process, the investor reveals its identity, the specific instrument and volume it wants to trade, and often the direction of the trade.

67. An investor interested in buying or selling a GSE bond generally contacts no more than a few dealers. This is because it is time-consuming and laborious to contact dealers via the telephone or instant message, and dealers usually place short expiration times on the quote they provide. Given these constraints, it is not practical for investors to “shop around” to more than a few dealers at a time. In fact, investors seeking quotes from too many dealers increases the number of dealers that know of the investor’s interest in a given bond. Such visibility into order flow and demand for the bonds increases the chance of “front running”¹⁰ or other forms of market manipulation.

68. The need for investors to transact with dealers generates a steady flow of market information for Defendants, including a wealth of investor-specific information. This valuable information includes, among other things, which bonds an investor holds and in what quantity,

¹⁰ Front-running is the practice of a broker or trader taking action before a large order to gain an economic advantage. For example, a broker receives a request from a client to buy 500,000 shares of XYZ Company. He holds the client’s order until after personally executing an order for the same stock for his account.

whether it is an ongoing buyer or seller of certain bonds, and the price levels at which it has traded or is seeking to trade. The market information dealers collect through the customer inquiry process is a critical component in dealers' analysis of the market. The information is proprietary, confidential and extremely valuable. In a competitive market, where dealers actually compete against each other, no dealer would forfeit its competitive advantage by disclosing such sensitive information to another dealer.

I. DEFENDANTS FAILED TO SEPARATE THEIR SYNDICATION FROM SECONDARY-MARKET FUNCTIONS, INVITING IMPROPER COLLUSION

69. At most banks that underwrite and trade bonds, there is a clear structural delineation between the bond syndication desk and the bond trading desk. Those who work on the syndication desk specialize in securing, structuring, underwriting, pricing, and selling new bond issuances, but do not trade bonds in the secondary market. Conversely, those who work on the bond trading desk specialize in trading bonds that are typically not involved in securing, structuring, underwriting, pricing, and selling new bond issuances.

70. This structural separation between the bond syndication and trading desks makes good sense from a legal compliance perspective. In the syndication stage, the dealers retained by the issuer to underwrite the new bond issuance will work together closely—sharing information and strategy on bond structure, pricing, and demand. In theory, once the underwriting dealers agree on the price of a bond, all of them offer the bond to customers at the issue price during the syndication period. They then coordinate on when to end the syndication period and allow the bond to trade freely (i.e., “free to trade”). Depending on the type of GSE deal (a large benchmark issuance versus a smaller reverse inquiry deal), the syndication period can last anywhere from approximately 24 hours (large, benchmark issuances) to a week or more (smaller, reverse inquiry

issuances). Generally, once the bonds became “free to trade,” the syndication desk’s responsibilities end, and the trading desk takes over.¹¹

71. But on information and belief, this important structural division between the syndication desk and the trading desk did not apply to GSE bonds. This destruction of the wall between syndication and trading made no sense from a legal compliance perspective and made the market for GSE bonds ripe for collusion. The people who constantly talked and coordinated with other dealers regarding actual and potential new issues of GSE bonds were the very same people who traded the bonds after they hit the secondary market. Despite investor expectations, no distinction was enforced between coordinating on new issuance and coordinating on trading. To traders on Defendants’ GSE bonds desks, coordination was the normal *modus operandi*—whether on new issuances or secondary market trading. To them, there was not a syndication market and a separate trading market; it as all one market where information was freely exchanged and coordination was the norm. The very structure of the GSE bonds market thus facilitated the Defendants’ conspiracy—both by creating an environment in which it was the norm for secondary markets traders to exchange confidential, competitively sensitive information, and by giving traders permanent access to a wellspring of nonpublic information about upcoming GSE debt issues that would have a substantial impact on the prices of similar instruments already trading in the secondary market.

72. Electronic chatrooms offer an efficient and effective method through which the Defendants can coordinate their behavior, including in the market for GSE bonds. Specifically, the cartel members can use Instant Bloomberg—an instant messaging system available on

¹¹ At that point, investors expect that traders buying and selling bonds in the secondary market will not be coordinating with each other, but will instead be competing to transact with investors at the best possible prices.

terminals that Bloomberg LP leases to financial firms—to create standing chat rooms. Upon information and belief, traders employed by Defendants can access these standing chat rooms throughout the day to conspire to rig the market to their maximum advantage in real time. In addition to these standing chat rooms, cartel members can set up temporary chat rooms that are created for a limited purpose and then closed.

73. Chat rooms make collusion very easy. In chat rooms, cartel members can maintain a running commentary in real time about investors' inquiries and orders and their own positions and strategies. They can coordinate extraordinarily quickly, within seconds, whenever an opportunity arises to coordinate how they will respond to customer inquiries to avoid competition and to fix prices. Cartel members can communicate with each other in these chat rooms continuously, virtually every trading day and all throughout the day.

II. DEFENDANTS CONSPIRED TO MANIPULATE THE SPREADS OF GSE BONDS

74. The fundamental agreement among Defendants was that they agreed to not compete against each other in the market for GSE bonds. They agreed, instead, to cooperate to maximize their own profits at the expense of their customers, many of whom they shared in common (and for whose business they were supposed to be competing). Defendants' overarching objective was to ensure that cartel members would transact in GSE bonds with their investor clients at prices that were more favorable for their conspiring dealers—thus harming their customers—than would have been achieved in the absence of the collusion.

75. Upon information and belief, Defendants executed their conspiracy by communicating with each other via electronic chatrooms (using, for example, the Instant Bloomberg platform), instant messaging, telephone, and sometimes in-person meetings.

Through these mechanisms, Defendants conspired to rig the GSE bond market, to the detriment of members of the Class.

76. Upon information and belief, during the Class Period, the key personnel on Defendants agency bond desks (where GSEs were traded) included Mike Bosl (Deutsch Bank), Jerry Ching (Citi), Kevin Brinkman (Citi), Ian Burdette (Bank of America), Adam Cash (Deutsche Bank), Tim Coughlin (JPMorgan), Chad Debolt (Barclays, Credit Suisse), Anthony DeMartino (Barclays, UBS), Lou Diamond (Bank of America), Michael Effron (Credit Suisse), Lazlo Feledy (Deutsche Bank, JPMorgan), Alan Gates (FTN Securities), Beth Hammack (Goldman Sachs), Dave Isaac (BNP, UBS), Jeremy Johnson (FTN Securities), Mike Kahn (UBS), Paul Kaplan (Deutsche Bank), Jaiman Lee (Deutsche Bank, Goldman Sachs), David Martinelli (Morgan Stanley), Paul Miller (Deutsche Bank), Matt Peterman (FTN Securities), Justin Roth (Morgan Stanley), Steve Shulman (Citi), Patrick Snipes (FTN Securities), Christian Turner (FTN Securities), Adam Wigderson (UBS), and Joel Witten (UBS).

77. Through their communications, Defendants were kept constantly informed of each other's GSE Bond inventories, positions, customers, and pricing. This amassing and sharing of confidential information between dealers facilitated the conspiracy by (a) giving Defendants a huge informational advantage over their customers, (b) allowing them to position their books to take advantage of customer trading strategies, and (c) monitoring adherence to the conspiracy.

78. Defendants turned a blind eye to the illicit use of such chat rooms to facilitate and enforce collusion during the Class Period. They were focused instead on their bottom line. It is only recently that some Wall Street banks could no longer ignore the degree to which traders had used these types of chat rooms to rig multiple financial markets. Governmental regulators have

discovered multiple cartels, such as in the foreign exchange market, which relied heavily on these chatrooms.

79. Law enforcement authorities and regulatory agencies in the United States are actively investigating Defendants' conspiracy. On June 1, 2018, Bloomberg first reported that the DOJ had launched an investigation into possible manipulation in the GSE market, focusing on "whether traders at banks coordinated with one another in order to benefit the institutions they work for. Investigators are looking at potential fraud and antitrust violations."¹² According to the report, "[p]rosecutors from the Justice Department's antitrust division and criminal division are working on the investigation."¹³

80. Defendant Deutsche Bank is one of the primary targets of the DOJ investigation, and Mike Bosl, the head of agency bond trading at Deutsche Bank during the Class Period, is no longer working at Deutsche Bank. Several other Defendants also have been implicated in the DOJ investigation, including Goldman Sachs, BNP Paribas, and Morgan Stanley, according to FINRA records. FINRA records from January 2019 indicate that Alexis Frum (a.k.a. Alex Frum), a director and head of agency trading who was employed at BNP Paribas since July 2010, is being investigated due to "[a]llegations regarding communications with other syndicate members on bond underwritings." FINRA records also indicate that Justin Roth, a trader of GSE bonds at Morgan Stanley, was discharged in June 2018—just weeks after the Bloomberg news report—due to "[a]llegations regarding failure to follow the firm's reporting and escalation procedures and standards involving communications from and with others regarding the

¹² David McLaughlin & Tom Schoenberg, *U.S. Opens Criminal Probe Into Trading in Fannie, Freddie Bonds*, BLOOMBERG (June 1, 2018), <https://www.bloomberg.com/news/articles/2018-06-01/trading-in-fannie-freddie-bonds-is-said-to-be-probed-by-u-s>.

¹³ *Id.*

representative's trading or markets activity.” And in June 2018, Goldman Sachs terminated GSE bond trader Jaiman Lee due to “allegations regarding communications with other syndicate members on bond underwritings,” FINRA records show.

81. As expounded upon below, the wrongdoing here is just the latest in a trend. For example, as recently as January 31, 2018, the European Commission announced it had served Statements of Objection on eight banks based on “its preliminary view that they have breached EU antitrust rules by colluding to distort competition when acquiring and trading European government bonds.”¹⁴ The Commission found the banks’ “contacts would have taken place mainly—but not exclusively—through online chat rooms.”¹⁵ A month earlier, the Commission announced Statements of Objection issued to four banks—including Defendant Deutsche Bank here—expressing “its preliminary view that they have breached EU antitrust rules by colluding .. . to distort competition in secondary market trading in the EEA of supra-sovereign, and agency (SSA) bonds denominated in US Dollars.”¹⁶ Again, the Commission found that the bank’s “contacts would have taken place mainly through online chat rooms.”¹⁷ Time and again, government regulators have found cartels in the financial markets coordinated by a relatively small number of traders using electronic chat rooms.

82. Defendants’ collusion was also facilitated by the close-knit nature of the market. Upon information and belief, the GSE bond market is a “small world.” GSE traders are a

¹⁴ *Antitrust: Commission sends Statement of Objections in European government bonds cartel*, EUROPEAN COMMISSION (Jan. 31, 2019), http://europa.eu/rapid/press-release_IP-19804_en.htm.

¹⁵ *Id.*

¹⁶ *Antitrust: Commission sends Statement of Objections in US Dollar supra-sovereign, sovereign and agency bond trading cartel*, EUROPEAN COMMISSION (Dec. 20, 2018), http://europa.eu/rapid/press-release_IP-18-6895_en.htm

¹⁷ *Id.*

tightknit community, and they regularly socialize at events hosted by issuers and brokers, who facilitate trades between banks. For instance, FHLB hosted an annual dealer outing in New York, while FFCB hosted annual marketing trips and sponsored a large charity event that agency GSE traders attended. GSE traders also attended Government Investment Officers Association (“GIOA”) conferences and asset-backed security (“ABS”) conferences. In addition, regional dealers hosted large gatherings of GSE traders in such cities as Memphis, Minneapolis, and Tampa. Brokers constantly sought to entertain GSE traders with golf outings, dinners, and concerts. The collegial nature of the GSE market enabled Defendants’ conspiracy by providing Defendants with additional opportunities to collude even outside of work.

83. As a direct and proximate result of the conspiracy, Plaintiff and each Class member transacted in artificially inflated bid-offer spreads on their GSE bond transactions with Defendants. At the same time, Defendants reaped massive, supra-competitive profits on GSE bond trades that if not for their conspiracy would have had smaller margins.

III. PRICING DATA CONFIRMS THAT A CONSPIRACY WAS KEEPING SPREADS ARTIFICIALLY HIGH DURING THE CLASS PERIOD

A. Pricing Data Shows Spreads for GSE bonds Were Artificial During the Class Period

84. Screens are statistical tools based on economic models that use data such as prices, bids, quotes, spreads, market shares, and volumes to identify the existence, causes, and scope of conspiratorial behavior. Dr. Rosa Abrantes-Metz, a New York University professor who is among the most prominent academics in the world on screens and collusion cases, spearheaded the use of screens as part of an analysis that led to the discovery of the LIBOR rate-setting conspiracy that has roiled the banking industry. In the context of LIBOR, journalists and economists uncovered anomalous behavior in the benchmark as compared to movements in other

publicly available data points (data points that were independent of the banks' purported individualized judgment).¹⁸ Screens also led to the initial detection, in the summer of 2013, of the foreign exchange conspiracy, which resulted in over \$11 billion in settlements by banks in the United States, the United Kingdom, and Switzerland in November 2014.¹⁹

85. The first type of "screen" used in this case is a straightforward regression analysis. A regression model is an econometric tool for measuring how well one or more of the tested variables explain or predict a given outcome. A regression model can be used to determine whether changes observed in the real world can be explained solely by legitimate factors, such as contemporaneous changes to the wider economic environment, and other product-specific relevant characteristics.²⁰ A regression model is thus one well-accepted method for detecting an antitrust conspiracy and determining if it impacted purchasers.

86. By including variables that account for legitimate drivers of changes in bid-ask spreads, a regression model seeks to control for all the observable (or directly measurable) reasons bid-offer spreads might be changing other than the existence of a conspiracy. In this

¹⁸ See generally Testimony of Rosa M. Abrantes-Metz on behalf of the Office of Enforcement Staff, FED.ENERGY REG.COMMISSION (Sept. 22, 2014), http://elibrary.ferc.gov/idmws/doc_info.asp?document_id=14274590; see also Testimony of Margaret C. Levenstein, University of Michigan, To Senate Committee on the Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights On "Cartel Prosecution: Stopping Price Fixers and Protecting Consumers" (Nov. 14, 2013), <https://www.judiciary.senate.gov/imo/media/doc/11-14-13LevensteinTestimony.pdf>.

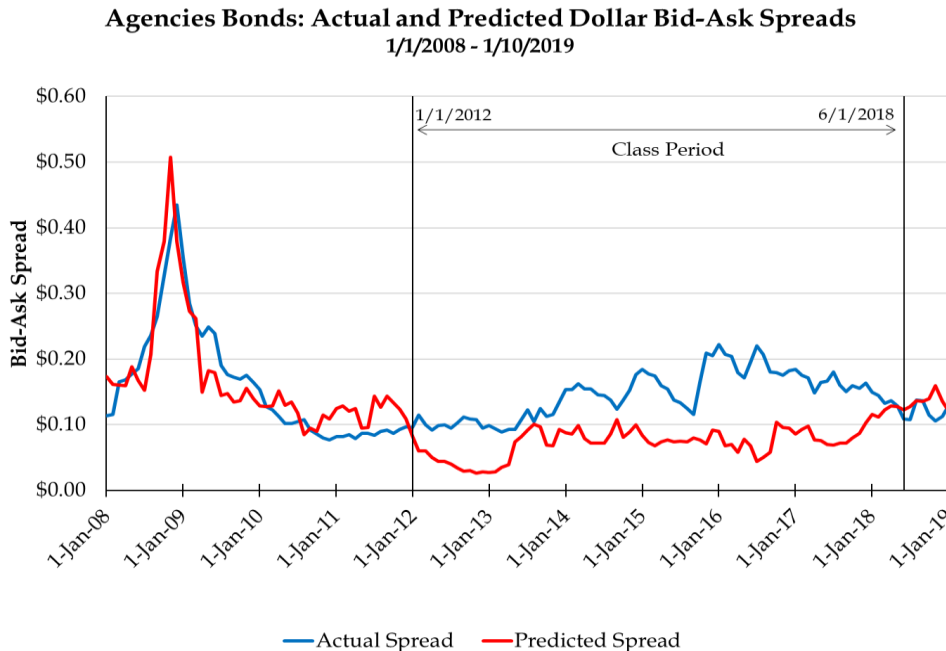
¹⁹ See Liam Vaughan and Gavin Finch, *Currency Spikes at 4 P.M. in London Provide Rigging Clues*, BLOOMBERG (Aug. 27, 2013), <http://www.bloomberg.com/news/2013-08-27/currency-spikes-at-4-p-m-in-london-provide-rigging-clues.html>

²⁰ See, e.g., American Bar Association, *Econometrics: Legal, Practical, and Technical Issues* (2d. ed. 2005), at 305 ("Econometric and regression analyses are particularly useful in separating the impact of an alleged anticompetitive act on market outcomes (such as pricing) from the impact of other influences. That is, when correctly implemented, econometric techniques can isolate and measure the effect of a single explanatory factor on the economic outcomes that are relevant when estimating damages.").

case, the chart below modeled dollar bid-offer spreads as a function of a variety of market fundamentals and bond-specific characteristics. These factors include: the dollar amount of a bond's initial issuance; the bond's liquidity, as measured by the number of quotes; the bond's duration; the bond's credit risk as captured by comparing its yield to the yield of U.S. Treasury bonds, both over time and contemporaneously with respect to other bonds; the bond's price volatility; and the level of risk-free interest rates as measured by Treasury yields. Factors such as these are supported by the academic literature as fundamental drivers of bid-offer spreads.²¹ The chart below also includes a fixed variable to control for the effect of the U.S. financial crisis beginning in the Fall of 2008.

87. To see the comparative accuracy of the regression model visually, consider the following chart. Here, the blue line tracks the actual bid-offer spread seen in the real-world. The red line, in contrast, represents what bid-offer spreads "should" have been, as predicted by standard economic and bond specific factors as also discussed above.

²¹ See, e.g., Thomas Copeland & Dan Galai, *Information Effects on the Bid-Ask Spread*, 38 J. FIN. 1457, 1457-68 (1983); Richard Roll, *A Simple Implicit Measure of the Effective BidAsk Spread in an Efficient Market*, 39 J. FIN. 1127, 1127-35 (1994); Sugato Chakravarty & Asani Sarkar, *Trading Costs in Three U.S. Bond Markets*, 13 J. FIXED INCOME 39, 39-48 (2003); Hendrik Bessembinder, William Maxwell, & Kumar Venkataraman, *Market Transparency, Liquidity Externalities, and Institutional Trading Costs in Corporate Bonds*, 82 J. FIN.ECON. 251, 257-82 (2006); Amy K. Edwards, Lawrence E. Harris & Michael S. Piwowar, *Corporate Bond Market Transaction Costs and Transparency*, 62 J. FIN. 1421, 1426-49 (2007).



88. The red and blue lines are closely correlated from the beginning of the study in 2008 until early 2012. They are in sync again after June 1, 2018—the day Bloomberg first reported that the DOJ had launched an investigation into possible manipulation in the market for GSE bonds. Again, this demonstrates that for the “before” and “after” periods, the model accurately predicts the bid-offer spreads seen in the market-wide data in the real world. But during the conspiracy period, the red and blue lines diverge considerably. Notably, and tellingly, the gap in this period is not only much larger, and much more consistent than the small gaps seen in the before and after periods, but it is also always in one direction. That is, the model always indicates that spreads should have been lower than they were in the real-world. This is powerful evidence of a conspiracy to keep spreads artificially high.

IV. THE RESULTS OF THE ECONOMETRIC ANALYSES ARE WHAT THE ACADEMIC LITERATURE PREDICTS WOULD RESULT FROM AN ANTICOMPETITIVE CONSPIRACY

89. The above economic analyses demonstrate that Defendants’ collusion harmed Class members on GSE bond transactions during the Class Period. As defined below, the Class

is composed of those investors, including pension funds, state funds, university endowment funds, hedge funds, insurance companies, corporate treasuries, fiduciary and depository institutions, small banks, and money managers, who executed GSE bond trades with Defendants and their co-conspirators during the Class Period, within the flow of U.S. commerce.²²

90. By colluding, Defendants were able to transact with their investor clients at prices that were more favorable for the conspiring dealer—and thus worse for the customer—than would have been achieved in the absence of the collusion. That was, after all, the reason they conspired. Defendants unlawfully conspired day after day because it allowed them to make more money from customer transactions than they could have made without colluding.

91. The nation's economy relies on free market competition because it is a basic premise of economics that competition results in better prices and higher product quality for consumers.²³ This basic economic premise holds especially true in financial markets. It is well settled that in financial markets, like the market for GSE bonds, consumers suffer harm in the form of worse prices when dealers do not compete.

92. Which is to say, the data discussed above show the exact type of patterns the academic literature would expect in the presence of a conspiracy among dealers not to compete for business. Defendants' collusion harmed their customers because it greatly diminished the amount of dealer competition in the market. Defendants' conspiracy, in effect, reduced how

²² Although Defendants' cartel impacted the entire GSE bond market by fundamentally disrupting competition in the market overall, this case is limited to those investors who had the misfortune to trade directly with the cartel members—that is, the Defendants.

²³ See *N. Pac. Ry. Co. v. U.S.*, 356 U.S. 1, 4 (1958) (“The Sherman Act was designed to be a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade. It rests on the premise that the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material progress, while at the same time providing an environment conducive to the preservation of our democratic political and social institutions.”).

many trading desks were competing in the market for customer business. Dealer competition in the market for GSE bonds was significantly suppressed, leading to wider spreads, as seen above in Section III.A.

93. The academic literature has long established that more competition among dealers reduces spreads and prices paid by investors in financial markets. Conversely, less competition among dealers widens spreads and prices. As Professor Darrell Duffie, who is one of the world's leading experts on OTC market structure, explained as part of the Thirteenth Baffi Lecture presented at the Banca d'Italia in Rome, on September 15, 2017: "Well-established economic theory implies that markets are more efficient and investors receive better pricing when more market participants compete for trade at the same venue. Most obviously, from the viewpoint of a quote seeker, the best price from among a small set of bidders is not as attractive as the best price available from an enlarged set of bidders."²⁴

94. Numerous additional studies have shown how increased competition among dealers reduces transaction costs for bond market participants. In a study of corporate bond transactions, Anthony Saunders, Anand Srinivasan, and Ingo Walter found that when more dealers responded to a request for quotes on a transaction, the resulting quotes were more

²⁴ Darrell Duffie, *Bank Debt Overhang and Financial Market Liquidity*, THIRTEENTH PAOLO BAFFI LECTURE, 67 (2017) ("Baffi Lecture"). The Bank of Italy's Paolo Baffi Lecture is one of the most prestigious money and finance lecture series in the world. The Baffi Lecture is devoted to promoting scholarly writings that advance theoretical and applied analysis in the field of economics. The lecturers, selected by a committee of distinguished economists and civil servants, are preeminent scholars and leaders in their field that offer original contributions to a wide variety of issues related to money and finance.

competitive.²⁵ Specifically, the authors found that the difference between the winning bid and the second-best bid was smaller when more dealers competed for the transaction.²⁶

95. In yet another published research paper, Yee Cheng Loon and Ken Zhong demonstrated that the greater the number of dealers competing to make markets for credit default swaps, the lower are the effective bid-offer spreads—and therefore the more favorable are the transaction prices—realized by customers for those swaps, again controlling for other factors. As the authors concluded: “Increased competition among dealers for order flow reduces bid-ask spreads and improves liquidity.”²⁷ A wealth of academic literature has similarly concluded that competition among dealers reduces spreads paid by investors in OTC markets and otherwise.²⁸

²⁵ Anthony Saunders, Anand Srinivasan & Ingo Walter, *Price Formation in the OTC Corporate Bond Markets: A Field Study of the Inter-Dealer Market*, 54 J.ECON.&BUS. 95, 111 (2002).

²⁶ *Id.* at 106 & tbl.6a. The authors analyzed a randomly selected sample of bond trades conducted by a major dealer in the OTC corporate bond market from January 1, 1997 to November 28, 1997. These trades were carried out as auctions, with telephone bids received from multiple dealers who were competing for the transaction; the data from the dealer book provides the names of all the bidding dealers, prices quoted by these dealers and the price of the winning bid. *Id.* at 98. The authors found that “an increase of one additional bidder reduces the price difference between the best and second-best bids by 23.6%.” *Id.* at 102 & tbl.5.

²⁷ Yee Cheng Loon & Ken Zhong, *Does Dodd-Frank affect OTC transaction costs and liquidity? Evidence from the real-time CDS trade reports*, 119 J.FIN.ECON. 645, 651 (2016).

²⁸ See, e.g., M. Tinic & Richard R. West, *Competition and the Pricing of Dealer Service in the Over-the-Counter Stock Market*, 7 J.FIN.&QUANTITATIVE ANALYSIS 1707, 1709 (1972) (“In brief, our principal conclusion is that increases in the amount of interdealer competition in this [OTC] market tend to reduce the price of dealer services (reduce spreads) and thus, tend to increase the marketability of issues.”); Yakov Amihud & Haim Mendelson, *Asset pricing and the Bid-Ask Spread*, 17 J.FIN.ECON. 223, 224 (1986) (noting that “the relative spread on stocks has been found to be negatively correlated with liquidity characteristics such as the trading volume, the number of shareholders, the number of market makers trading the stock and the stock price continuity”); Seha Oleg Bondarenko, *Competing market makers, liquidity provision, and bid–ask spreads*, 4 J.FIN.MKTS. 269, 273 (2001) (finding that “the bid-ask spreads resulting from noncooperative but imperfect competition will usually be much narrower than those resulting from explicit collusion, in which market makers cooperate to fix prices”). In a study of the foreign exchange markets—which, like the market for GSE bonds, are also OTC markets where large financial institutions act as dealers—Carol Osler, Geir Bjornnes, and Neophytos Kathiziotis showed that transaction costs for customers in foreign exchange transactions are lower in multibank electronic platforms, where several dealers compete simultaneously to provide quotes

96. As Professor Duffie explained, when an OTC dealer perceives that an investor client lacks attractive outside options to obtain quotes, “the dealer can widen its bid-offer spread accordingly.”²⁹

97. In short, the academic literature repeatedly concludes that a reduction in competition leads to wider bid-offer spreads. This confirms that the studies discussed above—which found bid-offer spreads being too wide for a period of many years—are cogent evidence that the market for GSE bonds was subject to a competition-reducing conspiracy during that period.³⁰

98. The calculation of Class member damages in this case will necessarily be informed by discovery and expert analysis. Well-known methods exist for estimating the extent to which prices are affected by collusion of the type that occurred here and will be applicable in this case. For example, damages likely can be quantified by comparing the bid-offer spreads

in response to the customer’s request, than in single-bank platforms or in direct transactions with desks of individual dealers. *See* Carol Osler, Geir Bjornnes, and Neophytos Kathiziotis, *Bid-Ask Spreads in OTC Markets*, 33, tbl.3 (Brandeis Univ. Working Paper No. 102, 2016). The authors found that multi-bank platforms provide the lowest transaction costs—measured as the difference between the price paid by the consumer on a transaction and the interbank quote at the time of the transaction—because they facilitate more competition among dealers. *Id.* at 10-11.

²⁹ Baffi Lecture, at 64.

³⁰ Defendants’ ability to charge non-competitive prices to their customers by actively coordinating on certain transactions also had effects that extended beyond any individual transaction. This is because, among other reasons, it is well-understood in the finance literature that market participants use information gained from recent trade history to update their beliefs regarding the value of a security, causing current prices to propagate into future trade prices. *See e.g.*, Joel Hasbrouck, *Measuring the Information Content of Stock Trades*, 1 J. FIN. 179, 179 (1991) (“Central to the analysis of market microstructure is the notion that in a market with asymmetrically informed agents, trades convey information and therefore cause a persistent impact on the security price.”). As a result, the harm suffered by investors who traded with Defendants at an inflated price because of an instance of overt price-fixing was not isolated to the worse execution price paid by the customer in the single transaction itself. The artificially high price (if the customer purchased) or its artificially low price (if the customer sold) also affected the prices at which the investor would engage in subsequent trades, because the price in the rigged transaction served as a reference point for the pricing of subsequent transactions.

paid by Class members in the actual world (the world affected by the conspiracy) to the spreads paid on comparable instruments after the period of collusion ended, while controlling for other (non-collusive) factors which can also impact bid-offer spreads. The research literature on bonds and other OTC financial instruments provides guidance on other factors that can impact spreads and how to control for these factors in a statistical model so as to isolate the reduction in bid-offer spreads that occurred at the end of the collusion, thus isolating the impact of the collusion on the transactions prices of GSE bonds.³¹ As another example of analysis that could be applied on a class wide basis, the profit margins and spreads on similar types of bonds or investment vehicles in a competitive market with a similar number of dealers over a similar period could be used to establish a benchmark of what spreads and profit margins should look like. The analyses discussed above, applied to the available public data, are examples of the types of studies that could be used at trial.

V. DEFENDANTS CONDUCT IN THE MARKET FOR GSE BONDS IS THE LATEST EXAMPLE OF THEIR COLLUSIVE, ANTICOMPETITIVE CONDUCT IN THE FINANCIAL SYSTEM

99. Defendants' manipulative and anticompetitive conduct in the market for GSE bonds is just the latest in a long string of revelations about their anticompetitive activities in our financial system.

A. Investigation into the Manipulation of SSA Bonds

³¹ See, e.g., Thomas Copeland & Dan Galai, *Information Effects on the Bid-Ask Spread*, 38 J.FIN. 1457, 1457-68 (1983); Richard Roll, *A Simple Implicit Measure of the Effective BidAsk Spread in an Efficient Market*, 39 J.FIN. 1127, 1127-35 (1994); Sugato Chakravarty & Asani Sarkar, *Trading Costs in Three U.S. Bond Markets*, 13 J.FIXED INCOME 39, 39-48 (2003); Hendrik Bessembinder, William Maxwell, & Kumar Venkataraman, *Market Transparency Liquidity Externalities, and Institutional Trading Costs in Corporate Bonds*, 82 J.FIN.ECON. 251, 257-82 (2006); Amy K. Edwards, Lawrence E. Harris & Michael S. Piwowar, *Corporate Bond Market Transaction Costs and Transparency*, 62 J.FIN. 1421, 1426-49 (2007).

100. In December 2015, there were reports that the DOJ had launched an investigation into collusion in the supranational, sovereign, and agency bonds (“SSA bonds”) market.³² A month later, on January 6, 2016, the Financial Times and International Financing Review confirmed the DOJ’s probe, the latter indicating that the DOJ was looking at “possible manipulation of bond prices.”³³

101. According to the International Financing Review report, the DOJ was “investigating allegations that SSA traders at different banks agreed [on] prices and shared information on certain US dollar bonds in chat rooms they established for the purpose.”³⁴ According to a Bloomberg report, “Prosecutors have obtained transcripts of online chat room conversations indicating possible misconduct and have contacted banks, asking them to delve further into the behavior.”³⁵ The DOJ reportedly had sent information requests to Nomura, among others.³⁶

102. On January 20, 2016, Bloomberg reported that the U.K. Financial Conduct Authority, which previously had been assisting the DOJ, had started its own investigation into

³² David McLaughlin & Tom Schoenberg, U.S. Said to Probe Possible Rigging in Agency Bond Market, BLOOMBERG (Dec. 9, 2015), <http://www.bloomberg.com/news/articles/2015-12-09/u-s-said-to-probe-possible-rigging-in-agency-bond-market>.

³³ Abhinav Ramnarayan & Helene Durand, EXCLUSIVE – DoJ Investigates Bond Traders Over Market-Rigging, INT’L FIN.REV. (Jan. 6, 2016), www.ifre.com/exclusive-dojinvestigates-bond-traders-over-market-rigging/21230385.fullarticle.

³⁴ *Id.*

³⁵ David McLaughlin & Tom Schoenberg, *U.S. Said to Probe Possible Rigging in Agency Bond Market*, BLOOMBERG (Dec. 9, 2015), <https://www.bloomberg.com/news/articles/2015-12-09/u-s-said-to-probe-possible-rigging-in-agency-bond-market>.

³⁶ Craig McGlashan, Owen Sanderson, Ralph Sinclair & Toby Fildes, *Scandal Rocks SSA Market*, GLOBAL CAP. (Jan. 7, 2016), <http://www.globalcapital.com/article/vydmn22frhms/trading-scandal-rocks-ssa-market>.

collusion in the SSA market.³⁷ On February 9, 2016, the Financial Times reported that in addition to the DOJ and Financial Conduct Authority, the European Commission had also opened a cartel investigation into possible collusion in the SSA market.³⁸ Citigroup has noted in its Form 10-K filings that its SSA bond trading activities were under investigation.³⁹

103. In February 2017, Bloomberg reported that the DOJ and the U.K.’s Financial Conduct Authority (“FCA”) investigations “are escalating as authorities seek to interview traders.”⁴⁰ According to Bloomberg, U.S. prosecutors “obtained transcripts of online chat-room conversations indicating possible misconduct” and are pressing forward with a criminal probe.⁴¹ Later, in October 2017, Bloomberg reported that the FCA had “closed” its “two-year investigation” by sending non-public letters to four “traders at the center of the probe,” and that the FCA had provided “[n]o details on why the probe had been closed.”⁴²

104. On December 20, 2018, the European Commission announced that it had issued Statements of Objection to four banks concerning their trading of USD SSA Bonds—including

³⁷ Suzi Ring & Tom Schoenberg, *U.K. Said to Open Probe Into Rigging of Agency Bonds Market*, BLOOMBERG (Jan. 20, 2016), <https://www.bloomberg.com/news/articles/2016-01-20/agency-bond-rigging-probe-said-to-expand-as-u-k-opens-inquiry-ijmri0ov>.

³⁸ Jim Brunsten, *EU Probes Suspected Rigging of \$1.5tn Debt Market*, FIN. TIMES (Feb. 9, 2016), <https://next.ft.com/content/04befd8a-cf35-11e5-92a1-c5e23ef99c77>.

³⁹ Citigroup, Inc., Form 10-K at 296 (2016), <https://www.sec.gov/Archives/edgar/data/831001/000083100117000038/c-12312016x10k.htm> (“Government and regulatory agencies in the U.S. and in other jurisdictions are conducting investigations or making inquiries regarding Citigroup’s sales and trading activities in connection with sovereign securities. Citigroup is fully cooperating with these investigations and inquiries.”).

⁴⁰ Suzi Ring & Tom Schoenberg, *Agency Bond Traders Said to Face Questions in Rigging Probe*, BLOOMBERG (Feb. 1, 2017), <https://www.bloomberg.com/news/articles/2017-0201/agency-bond-traders-said-to-face-questions-in-rigging-probe-iyng8sg38>.

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⁴¹ *Id.*

⁴² Suzi Ring, *Agency Bond-Rigging Probe is Said to Be Dropped by Britain’s FCA*, BLOOMBERG (Oct. 31, 2017), <https://www.bloomberg.com/news/articles/2017-10-31/agencybond-rigging-probe-is-said-to-be-dropped-by-britain-s-fca>.

Defendants Deutsche Bank and Bank of America.⁴³ The Statements express the Commission’s “preliminary view that they have breached EU antitrust rules by colluding, in periods from 2009 to 2015, to distort competition in secondary market trading in the EEA of supra-sovereign, sovereign and agency (SSA) bonds denominated in US dollars.”⁴⁴ Notably:

The Commission has concerns that at different periods between 2009 and 2015, the four banks exchanged commercially sensitive information and coordinated on prices concerning US dollar denominated supra-sovereign, sovereign and agency bonds, known as “SSA bonds”. These contacts would have taken place mainly through online chatrooms.⁴⁵

105. Under European competition law, a Statement of Objection carries great weight—it is issued only after an “in-depth investigation confirms the Commission’s competition concerns.”⁴⁶ Defendant Deutsche Bank has admitted it has “proactively cooperated with the European Commission in this matter” in exchange for prosecutorial immunity.⁴⁷

⁴³ *Antitrust: Commission sends Statement of Objections in US Dollar supra-sovereign, sovereign and agency bond trading cartel*, EUROPEAN COMMISSION (Dec. 20, 2018), http://europa.eu/rapid/press-release_IP-18-6895_en.htm; Aoife White, et al., *Deutsche Bank, Credit Suisse Targeted by EU Bond Probe*, BLOOMBERG (Dec. 20, 2018), <https://www.bloomberg.com/news/articles/2018-12-20/four-banks-targeted-by-eu-antitrustobjections-over-ssa-bonds>.

⁴⁴ *Antitrust: Commission sends Statement of Objections in US Dollar supra-sovereign, sovereign and agency bond trading cartel*, EUROPEAN COMMISSION, (Dec. 20, 2018), http://europa.eu/rapid/press-release_IP-18-6895_en.htm.

⁴⁵ *Id.*

⁴⁶ *Competition: Antitrust Procedures in anticompetitive agreements*, EUROPEAN COMMISSION, http://ec.europa.eu/competition/publications/factsheets/antitrust_procedures_101_en.pdf.

⁴⁷ *Statement on antitrust investigation of the European Commission* DEUTSCHE BANK, (Dec. 20, 2018), https://www.db.com/newsroom_news/2018/statement-on-antitrustinvestigation-of-the-european-commission-en-11752.htm.

106. To date, several banks—including Defendants Bank of America and Deutsche Bank—have agreed to pay approximately \$100 million to settle private antitrust claims alleging they conspired to rig the SSA bond market.⁴⁸

B. Investigation into the Manipulation of European Government Bonds

107. On December 20, 2018, the European Commission announced that it had issued Statements of Objection to eight banks concerning the “European government bonds cartel.”⁴⁹ The commission informed the banks of “its preliminary view that they have breached EU antitrust rules by colluding in periods from 2007 to 2012, to distort competition when acquiring and trading European government bonds.”⁵⁰ Specifically it noted:

The Commission has concerns that, at different periods between 2007 and 2012, the eight banks participated in a collusive scheme that aimed at distorting competition when acquiring and trading European government bonds (“EGBs”) Traders employed by the banks exchanged commercially sensitive information and coordinated on trading strategies. These contracts would have taken place mainly but not exclusively through online chatrooms.⁵¹

108. The DOJ investigation into the banks’ GSE bond trading practices is just the latest in a long string of revelations about their corruption in the financial system. With each additional scandal, it becomes clearer that these are not isolated events, but rather that this type of behavior was viewed as the standard operating procedure by Defendants and others in the banking industry.

⁴⁸ Joseph Stempel, *HSBC to pay \$30 million to settle bond rigging lawsuit in U.S.*, REUTERS (Jan. 10, 2019), <https://www.reuters.com/article/us-hsbc-settlement-bonds/hsbc-to-pay30-million-to-settle-bond-rigging-lawsuit-in-u-s-idUSKCN1P41W3>.

⁴⁹ *Antitrust: Commission sends Statement of Objections in European government bonds cartel*, EUROPEAN COMMISSION, (Jan. 31, 2019) http://europa.eu/rapid/press-release_IP-19804_en.htm.

⁵⁰ *Id.*

⁵¹ *Id.*

C. Investigations into the Foreign Exchange Market

109. Beginning in the fall of 2013, media reports surfaced that government regulators were investigating potential manipulation of the foreign exchange (“Forex”) market. These investigations quickly grew in scope to include authorities from across the globe. Again, many of these claims were uncovered in part through econometric analysis of the type performed here, i.e., an analysis of trading patterns and price movements.

110. In May 2015, Defendant Barclays, Defendant Citi, Defendant JPMorgan, RBS, and Defendant UBS were fined a total of \$3 billion by the DOJ, and each pled guilty to criminal conspiracy charges for manipulating Forex rates.⁵² The DOJ settlements followed a series of Orders from November 2014, where the Commodity Futures Trading Commission (“CFTC”) and FCA imposed over \$3.2 billion in fines on Defendants Citi, HSBC, Defendant JPMorgan, RBS, and Defendant UBS for manipulating the Forex market; the Office of the Comptroller of the Currency (“OCC”) fined Defendant Bank of America, Defendant Citi, and Defendant JPMorgan another \$950 million; and the Financial Market Supervisory Authority (“FINMA”) fined UBS \$141 million. On January 25, 2018, Defendant BNP Paribas pleaded guilty to conspiring to fix prices in the Forex market in violation of the Sherman Act.⁵³

111. The settlements entered to date lay out the details of how the banks colluded to manipulate Forex prices to their benefit. For instance, the CFTC found that Defendant Citi,

⁵² Plea Agreement, *U.S. v. Barclays*, No. 15-cr-00077 (D.Conn. May 20, 2015); Plea Agreement, *U.S. v. Citicorp*, No. 15-cr-00078 (D.Conn. May 20, 2015); Plea Agreement, *U.S. v. The Royal Bank of Scotland*, No. 15-cr-00080 (D.Conn. May 20, 2015); Plea Agreement, *U.S. v. UBS AG*, No. 15-cr-00076 (D. Conn. May 20, 2015); Order Instituting Proceedings Pursuant to Sections 6(c) and 6(d) of the Commodity Exchange Act, *In the Matter of Barclays Bank PLC*, CFTC Dkt. No. 15-25 (May 20, 2015).

⁵³ DOJ Press Release, *BNP Paribas US Inc. Pleads Guilty to Antitrust Conspiracy* (Jan. 26, 2018), <https://www.justice.gov/opa/pr/bnp-paribas-usa-inc-pleads-guilty-antitrustconspiracy>.

Defendant JPMorgan, RBS, Defendant UBS, and HSBC “used private electronic chat rooms to communicate and plan their attempts to manipulate the Forex benchmark prices.”⁵⁴ Bank traders used those inter-bank chat rooms to “coordinate[] their trading with certain FX traders at other banks to attempt to manipulate certain FX benchmark rates,” and to “disclose[] confidential customer order information and trading positions, alter[] trading positions to accommodate the interests of the collective group, and agree[] on trading strategies as part of an effort by the group to attempt to manipulate certain FX benchmark rates.”⁵⁵ Those exclusive chatrooms were often given colorful names like “The Cartel,” “The Mafia,” “The Club,” “The Bandits’ Club,” “The Dream Team,” “One Team, One Dream,” and “The Sterling Lads.”⁵⁶

D. Investigations into the Rigging of LIBOR

112. One of the first financial benchmarks to draw scrutiny from government regulators was LIBOR, which was supposed to reflect the rate that banks would pay to borrow funds in the inter-bank market. Following reports in the media that LIBOR had been manipulated—based on the use of economic “screens” similar to the ones used herein—regulators launched investigations into the conduct of the group of “panel banks” responsible for setting LIBOR.⁵⁷

113. Those investigations have revealed that instead of submitting their honest, expected borrowing costs, the LIBOR panel banks instead submitted deliberately false quotes for the purpose of manipulating the published LIBOR rate. Government investigations have resulted

⁵⁴ Order Instituting Proceedings, *In the Matter of Citibank, N.A.*, CFTC Dkt. No. 15-03 (Nov. 11, 2014).

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ Rosa Abrantes-Metz, *How to Use Statistics to Seek Out Criminals*, BLOOMBERG (Feb. 26, 2013), <https://www.bloomberg.com/opinion/articles/2013-02-26/how-to-use-statistics-toseek-out-criminals>.

in both criminal and regulatory charges, and have been coordinated between agencies from the United States, the United Kingdom, Canada, Japan, and the European Union.

114. The first panel bank to be formally charged was Barclays. In June 2012, Barclays was fined over \$450 million by the CFTC, DOJ, and U.K. Financial Services Authority (“FSA”). Barclays admitted to a detailed Statement of Facts, which cited scores of emails and chat messages in which traders schemed to manipulate LIBOR rates.⁵⁸

115. Later that year, the scandal widened when, for the first time, it was revealed that LIBOR manipulation was not restricted to traders within the panel banks, but also involved collusion between banks, and between banks and interdealer brokers. This revelation occurred in connection with UBS’s settlement agreements, wherein UBS was fined over \$1.5 billion for its role in manipulating LIBOR rates. Regulators found “[m]ore than 2,000 instances of unlawful conduct involving dozens of UBS employees, colluding with other panel banks, and inducing interdealer brokers to spread false information and influence other banks,” including thousands of requests to manipulate LIBOR in emails and electronic chat messages.⁵⁹

116. The Royal Bank of Scotland (“RBS”) was the next bank to fall. In early 2013, it was charged with felony counts of wire fraud and price-fixing in violation of the Sherman Act. RBS admitted that it colluded with other banks to manipulate LIBOR rates. In addition to the \$250 million in criminal fines imposed by the DOJ, RBS agreed to pay \$325 million in fines and disgorgement to the CFTC, and \$137 million to the FSA. Those regulators released many

⁵⁸ *Barclays’ Statement of Facts*, DEP’T JUST. (June 26, 2012), <http://www.justice.gov/iso/opa/resources/9312012710173426365941.pdf>.

Case

⁵⁹ *CFTC Orders UBS to Pay \$700 Million Penalty to Settle Charges of Manipulation, Attempted Manipulation and False Reporting of Libor and Other Benchmark Interest Rates*, COMMODITY FUTURES TRADING COMMISSION (Dec. 19, 2012), <http://www.cftc.gov/PressRoom/PressReleases/pr6472-12>.

specific examples of RBS’s collusive communications—including in the form of emails and instant chat messages—between traders at RBS and other panel banks. As stated before British Parliament by Johnny Cameron, RBS’s former Chairman of Global Banking and Markets, LIBOR manipulation involved “a cartel of people across a number of banks.”⁶⁰

117. On December 4, 2013, the European Commission issued its own set of findings, and fined Barclays, Citigroup, Deutsche Bank, JPMorgan, and RBS a total of \$1.7 billion for “participating in cartels in the interest rate derivatives industry.”⁶¹ The European Commission found that each of these banks “coordinated with each other” to manipulate LIBOR and related benchmarks, which included discussions of “confidential and commercially sensitive information that they are not allowed to share with other market players” and that they “exchanged their pricing and trading strategies and trading positions.”⁶²

VI. DEFENDANTS’ CONSPIRACY INJURED PLAINTIFF AND THE CLASS

118. Defendants’ conspiracy inflicted severe financial harm on Plaintiff and the Class and restrained competition in the market for GSE bonds.

119. As a direct and proximate result of their conspiracy, Defendants inflated their own profits while imposing supra-competitive prices and bid-offer spreads for GSE bonds on Plaintiff and the Class. Defendants injured each Class member – including pension funds, university

⁶⁰ *Parliamentary Commission on Banking Standards—Minutes of Evidence*, PARLIAMENT (Feb. 11, 2013), <http://www.publications.parliament.uk/pa/jt201314/jtselect/jtpcbcs/27/130211a.htm>.

⁶¹ *Antitrust: Commission fines banks € 1.49 billion for participating in cartels in the interest rate derivatives industry*, EUROPEAN COMMISSION (Dec. 4, 2013), http://europa.eu/rapid/press-release_IP-13-1208_en.htm.

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⁶² Joaquín Almunia, *Introductory Remarks on Cartels in the Financial Sector*, EUROPEAN COMMISSION (Dec. 4, 2013), http://europa.eu/rapid/press-release_SPEECH-131020_en.htm, at 2.

endowment funds, hedge funds, insurance companies, corporate treasuries, fiduciary depository institutions, small banks, and money managers—through a common scheme resulting in potentially billions of dollars in damages.

120. The Conspiracy alleged herein had and is having the following effects among others:

- a. GSE bond prices and bid-offer spreads charged to Plaintiff and the Class have been fixed or stabilized at supra-competitive levels;
- b. Plaintiff and the Class have been deprived of the benefits of free, open, and unrestricted competition in the market for GSE bonds; and
- c. Competition in establishing prices and bid-offer spreads paid in the United States for GSE bonds have been unlawfully restrained, suppressed, and eliminated.

121. By reason of the violations of Section 1 of the Sherman Act alleged in this complaint, Plaintiff and the members of the Class have sustained injury to their business or property. The injuries sustained by Plaintiff and the Class are the payment of supra-competitive prices and bid-offer spreads for GSE bonds as a result of Defendants' conspiracy to restrain trade as alleged. This is an antitrust injury of the type that the antitrust laws were meant to punish and prevent.

EQUITABLE TOLLING BECAUSE OF DEFENDANTS' CONCEALMENT

122. During the Class Period, Defendants actively, fraudulently, and effectively concealed their conspiracy from Plaintiff and members of the Class.

123. By its very nature, the unlawful activity alleged herein was self-concealing. Defendants conspired to artificially inflate bid-offer spreads to the benefit of Defendants and to the detriment of Plaintiff and members of the Class, and they further conspired to keep their

collusive and manipulative conduct secret. As a result, Plaintiff and the Class did not discover and could not have discovered through the exercise of reasonable due diligence that they were injured by Defendants' conspiracy until at the earliest June 1, 2018 when the DOJ investigation became public news on Bloomberg.

124. Defendants fraudulently concealed their anticompetitive activities by, among other things, engaging in secret communications in furtherance of their conspiracy. These communications occurred in non-public chat rooms, instant messages, and through email, telephone calls, and in-person meetings, none of which are or were reasonably available to Plaintiff or members of the Class.

125. The chat rooms in question were operated by traders within Defendants' operations, and Defendants strictly limited access to the chat rooms. The substance of the conversations occurring within these chat rooms remains unknown to Plaintiff, and the full contours of Defendants' conspiracy are not public.

126. Defendants knew that they could not subject their collusive conduct to public scrutiny. In addition, Defendants actively and jointly concealed their conspiracy. For instance, Defendants agreed among themselves not to publicly discuss or otherwise reveal the nature and substance of the acts and communications in furtherance of the conspiracy.

127. None of the facts or information available to Plaintiff, if investigated with reasonable diligence, could or would have led to the discovery of the conspiracy alleged in this Complaint.

128. There are many additional reasons why these facts could not have been known. GSE bond trades occur primarily in the private, over-the-counter market, and Defendants' trades and trading strategies are not public information. Reasonable due diligence could not have

uncovered Defendants' conspiracy because the non-exchange-based, closed, and private nature of the trades helped to conceal Defendants' conduct. Indeed, throughout the Class Period, Plaintiff and members of the Class regularly monitored news reports concerning the financial industry and the GSE bonds market. Plaintiff and members of the Class undertook such activity in order to try to buy and sell GSE bonds at good prices. Nonetheless, Plaintiff and members of the Class did not know of, and could not have known of, Defendants' conspiracy until the Bloomberg article was published on June 1, 2018.

129. Because of Defendants' concealment, any applicable statute of limitations affecting or limiting the rights of action by Plaintiff or members of the Class have been tolled during the period of concealment.

CLASS ACTION ALLEGATIONS

130. Plaintiff, on behalf of itself and those similarly situated, seeks damages against Defendants based on the allegations contained herein.

131. Plaintiff brings this action on behalf of itself and, under Federal Rule of Civil Procedure 23(a) and (b)(3), as the representative of a Class defined as follows:

132. All persons or entities who, from January 1, 2012 to June 1, 2018, directly transacted in unsecured Fannie Mae, Freddie Mac, FFCB, or FHLB bonds with Defendants, or their respective subsidiaries or affiliates, in the United States or its territories or otherwise involving U.S. trade or commerce. Excluded from the Class are Defendants, their co-conspirators identified herein, and their officers, directors, management, employees, current subsidiaries or affiliates, and all federal governmental entities.

133. **Numerosity.** Members of the Class are so numerous that joinder is impracticable. Plaintiff does not know the exact size of the Class, but believes that there are thousands of Class members geographically dispersed throughout the United States.

134. **Typicality.** Plaintiff's claims are typical of the claims of the members of the Class. Plaintiff and all members of the Class were damaged by the same wrongful conduct of Defendants. Specifically, Defendants' wrongdoing caused Plaintiff and members of the Class to pay inflated bond prices when they were buying or receive unduly low bond prices when they were selling.

135. Plaintiff will fairly and adequately protect and represent the interests of the Class. The interests of Plaintiff are coincident with, and not antagonistic to, those of the Class. Accordingly, by proving its own claims, Plaintiff will prove other Class members' claims as well.

136. **Adequacy of Representation.** Plaintiff is represented by counsel who are experienced and competent in the prosecution of class action antitrust litigation. Plaintiff and its counsel have the necessary financial resources to adequately and vigorously litigate this class action. Plaintiff can and will fairly and adequately represent the interests of the Class and have no interests that are adverse to, conflict with, or are antagonistic to the interests of the Class.

137. **Commonality.** There are questions of law and fact common to the Class, which questions relate to the existence of the conspiracy alleged, and the type and common pattern of injury sustained as a result thereof, including, but not limited to:

a. whether Defendants and their co-conspirators engaged in an agreement, combination, or conspiracy to fix, raise, elevate, maintain, or stabilize GSE bond bid-offer spreads in interstate commerce in the United States;

- b. the identity of the participants of the conspiracy;
- c. the duration of the conspiracy alleged herein and the acts performed by Defendants and their co-conspirators in furtherance thereof;
- d. whether the alleged conspiracy violated Section 1 of the Sherman Act;
- e. whether the conduct of Defendants and their co-conspirators, as alleged, caused injury to the business and property of Plaintiff and other members of the Class;
- f. the appropriate measure of damages sustained by Plaintiff and other members of the Class;
- g. whether Plaintiff and other Class Members are entitled to injunctive relief; and
- h. the appropriate injunction needed to restore competition.

138. **Predominance.** Questions of law and fact common to the members of the Class predominate over questions that may affect only individual Class members because Defendants have acted on grounds generally applicable to the entire Class, thereby making a common methodology for determining class damages as a whole appropriate. Such generally applicable conduct is inherent in Defendants' wrongful conduct.

139. **Superiority.** Class action treatment is a superior method for the fair and efficient adjudication of the controversy. Such treatment will permit a large number of similarly situated, geographically dispersed persons or entities to prosecute their common claims in a single forum simultaneously, efficiently, and without the unnecessary duplication of evidence, effort, or expense that numerous individual actions would engender. The benefits of proceeding through the class mechanism, including providing injured persons or entities a method for obtaining redress on claims that could not practicably be pursued individually, substantially outweighs

potential difficulties in management of this class action. The Class has a high degree of cohesion, and prosecution of the action through representatives would be unobjectionable.

140. Plaintiff knows of no special difficulty to be encountered in the maintenance of this action that would preclude its maintenance as a class action.

CAUSES OF ACTION

CLAIM ONE

VIOLATION OF 15 U.S.C. § 1 AGREEMENT RESTRAINING TRADE

141. Plaintiff hereby incorporates each preceding and succeeding paragraph as though fully set forth herein.

142. Defendants, and their co-conspirators, entered into and engaged in a conspiracy in unreasonable restraint of trade in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1. The conspiracy consisted of a continuing agreement, understanding, or concerted action between and among Defendants and their co-conspirators in furtherance of which Defendants fixed, maintained, or made artificial prices on unsecured GSE bonds.

143. Defendants' unlawful conduct was through mutual understandings, combinations, or agreements by, between, and among Defendants and other unnamed co-conspirators. Defendants' conspiracy is a per se violation of the Sherman Act and is, in any event, an unreasonable and unlawful restraint of trade.

144. There is no legitimate business justification for, or procompetitive benefits caused by, Defendants' unreasonable restraint of trade. Any ostensible procompetitive benefit was pretextual or could have been achieved by less restrictive means.

145. Defendants' conspiracy, and the resulting impact on the prices of GSE bonds occurred in and affected interstate commerce and commerce in and between the Territories of the United States.

146. As a direct, intended, foreseeable, and proximate result of Defendants' conspiracy and overt acts taken in furtherance thereof, Plaintiff and each member of the Class have suffered injury to their business or property. Plaintiff and each Class member's damages are directly attributable to Defendants' conduct, which resulted in all Class members paying artificially inflated bid-offer spreads on every unsecured GSE bond they purchased or sold during the Class Period.

147. Plaintiff's and the Class's injuries are of the type the antitrust laws were designed to prevent, and flow from that which makes Defendants' conduct unlawful.

148. Plaintiff and the Class are entitled to treble damages, attorneys' fees, reasonable expenses, and cost of suit for the violations of the Sherman Act.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff, on behalf of itself and the proposed Class of similarly situated entities, respectfully request that the Court:

a. Determine that this action may be maintained as a class action pursuant to Federal Rule of Civil Procedure 23(a) and (b)(3), direct that reasonable notice of this action, as provided by Federal Rule of Civil Procedure 23(c)(2), be given to the Class, designate Plaintiff as Class representative, and appoint Plaintiff's counsel as counsel for the Class;

b. Adjudge and decree that Defendants' unlawful conduct alleged herein violates Section 1 of the Sherman Act;

c. Permanently enjoin and restrain Defendants from continuing and maintaining the conspiracy alleged in the Complaint;

d. Find Defendants jointly and severally liable for the damages incurred by Plaintiff and the Class;

- e. Award Plaintiff and the Class damages against Defendants for their violations of federal antitrust laws, in an amount to be trebled in accordance with such laws, plus interest;
- f. Award Plaintiff and the Class their costs of suit, including reasonable attorneys' fees and expenses, as provided by law;
- g. Award Plaintiff and the Class all available pre-judgment and post judgment interest, to the fullest extent available under law or equity, from the date of service of the initial Complaint in this action; and
- h. Order such other, further, and general relief as it may deem just and proper.

JURY DEMAND

Pursuant to Federal Rule of Civil Procedure 38, Plaintiff, on behalf of itself and the proposed Class, demand a trial by jury on all issues so triable.

DATED: April 8, 2019

By: /s/Mitchell M.Z. Twersky
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